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<110> Seishi Kato and Tomoko Kimura

<120> HUMAN PROTEINS HAVING HYDROPHOBIC DOMAINS AND HAVING ENDOGENOUS THESE PROTEINS

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<150> JP 10-326255

<151> 1998-11-17

<150> JP 10-364315

<151> 1998-12-22

<150> JP 11-69811

<151> 1999-03-16

<150> JP 11-414394

<151> 1999-04-27

<150> JP 11-138169

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<160> 150

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 Phe Leu Leu Tyr Tyr Val Asp Thr Phe Val Ser Val Tyr Cys Ile Asn  
 25 26 27 28 29 30 31 32 33 34 35 36 37  
 Lys Met Ala Phe Trp Val Gly Gln Thr Val Phe Leu Leu Trp Asn Ser  
 38 39 40 41 42 43 44 45 46 47 48 49 50  
 Leu Asn Arg Leu Leu Pro Gly Trp Leu Ser Arg Arg His His Leu Ser  
 51 52 53 54 55 56 57 58 59 60 61 62 63





100

Glu Glu Tyr Lys Ala His Ile Thr Pro Arg Asp Leu Val Ala Ile Ser  
 11 112 113  
 Ala Glu Pro Leu Leu Ala Ala Pro Thr His Tyr Ala Gly Arg Ala Ala  
 890 111 114  
 Thr Leu Ser Asp Thr Glu Thr Ser Ser Pro Thr Asp Asp Asp Ser Gly  
 141 11 115 116  
 Arg Leu Ile Ser Thr Ser Gly Ser Glu Lys Thr Leu Arg Ser Pro Arg  
 161 117 118 119  
 Leu Asp Leu Thr Gly Ser Ser Gly His Ser Leu Glu Ile Glu Ile Arg  
 121 122 123  
 Asp Glu Leu  
 124

CALL>  
 CALL> 004  
 CALL> 1RT  
 CALL> Home Explain

CALL>  
 Met Val Ala Ser Ala Lys Met Gly Arg Ala Gly Thr Met Ala Val Ala  
 1 11  
 Ala Glu Leu Arg Glu Leu Lys Glu Gly Val Arg Arg Glu Ile Tyr Leu  
 12 13  
 Lys Glu Ser Gly His Lys Lys Gly Glu Thr Gly Lys Lys Thr Tyr Tyr  
 14 15 16 17  
 Tyr Glu Leu Thr Thr Pro Thr Leu Leu Thr Thr Val Leu Leu Leu Pro  
 18 19 20  
 Ser Lys Lys Lys Ala Ile Arg His Arg Arg Ala Lys Leu Arg Leu Glu  
 21 22 23 24 25  
 Glu Glu Glu Arg Glu Arg Glu Ile Arg Leu Leu Ala Tyr His Gly Ala  
 26 27 28 29 30  
 Lys His Gly Ala Gly Pro Ile Pro Thr Gly Ser Leu Leu Asp Leu Arg  
 31 32 33 34 35  
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 36 37 38 39 40  
 Pro Gly Thr Glu Pro Pro Pro Tyr Thr Val Ala Pro Gly Arg Glu Leu  
 41 42 43 44 45  
 Thr Ala Ser Ser Glu Glu Thr Lys Lys Ser Ser Ser Ser Ser Tyr Glu  
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 Ala His Ile Glu Gly Thr Arg Val Glu Gly Val Ser Ser Ser Ser Ser  
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 Ser Thr Pro Ser Lys Arg Tyr Arg Arg Leu Thr Gly Arg Ser Gly  
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CALL>  
 CALL> 004  
 CALL> 1RT  
 CALL> Home Explain

CALL>  
 Met Glu Ile Ile Ile Ile Gly Ile Leu Gly Arg Tyr Ile Leu Arg Ile

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 Leu Lys Lys Cys Lys Pro Ser Leu Pro Ala Glu Ala Glu Gly Ala Ala  
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 Met Glu Ala Tyr Leu Phe Lys Lys Asn Gly Leu Tyr Leu Ser Leu Val  
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 Tyr Lys Asp Glu Tyr Glu Lys Phe Lys Leu Tyr Leu Thr Ile Ile Leu  
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 165 170 175  
 Ile Arg Glu Ser Ile Leu Ile Asn Asn Gly Ser Arg Ile Lys Gly Thr  
 180 185 190  
 Trp Val Phe His His Tyr Val Ser Thr Phe Leu Ser Gly Val Met Leu  
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 Thr Trp Phe Asp Gly Leu Met Tyr Glu Lys Phe Arg Asn Glu Phe Leu  
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 Ser Ile Ser Met Tyr Glu Ser Ile Val Glu Ile Leu Glu Tyr Tyr Tyr  
 225 230 235 240  
 Glu Ser Gly Cys Leu Tyr Arg Leu Arg Ala Leu Gly Glu Arg His Thr  
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 Trp Glu Val Leu Met Tyr Gly Ile Pro Phe Leu Leu Leu Ile Leu Gly  
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8410-1  
 8411-144  
 8412-187  
 8413-188 (negative)

8430-1  
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 Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro Lys Ser Asn  
 35 40 45  
 Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser Glu Ile Lys Gly  
 50 55 60  
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 65 70 75  
 Thr Gly Ala Ser Ile Glu Ile Tyr Pro Phe Gly Tyr Arg Val Thr Tyr  
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Leu Asp Pro Asn Pro His Phe Glu Lys Phe Leu Thr Lys Ser Met Ala	100		105		11
Glu Asn Arg His Leu Gln Tyr Glu Arg Phe Val Val Ala Pro Gly Glu	115		120		125
Asp Met Arg Gln Leu Ala Asp Gly Ser Met Asp Val Val Val Cys Thr	130		135		140
Leu Val Leu Cys Ser Val Gln Ser Pro Arg Lys Val Leu Gln Glu Val	145		150		155
Arg Arg Val Leu Arg Pro Gly Gly Val Leu Phe Phe Trp Glu His Val	165		170		175
Ala Glu Pro Tyr Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu	180		185		190
Pro Thr Trp Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr	195		200		205
Trp Lys Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg	210		215		220
Gln Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly	225		230		235
Lys Ala Val Lys					24

0110-2  
 0110-3  
 0110-4  
 0110-5

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Ile Ala Gly Leu Leu Tyr Ala Leu Val Gln Leu Gly His Pro Cys Asp	20		25		30
Cys Leu Pro Pro Leu Arg Ala Ala Ala Glu Gln Leu Arg Gln Lys Asp	35		40		45
Leu Arg Ile Ser Gln Leu Gln Ala Glu Leu Arg Arg Pro Pro Pro Ala	50		55		60
Pro Ala His Pro Pro Glu Pro Glu Ala Leu Pro Thr Ile Tyr Val Val	65		70		75
Thr Pro Thr Tyr Ala Arg Pro Leu Trp Val Gln Tyr Pro His Asp Val	80		85		90
Thr Thr Pro Asn Ile Asp Asp Gln Tyr Leu Leu Gly Asp Ala Leu Leu	95		100		105
Val His Pro Val Ser Asp Ser Gly Ala His Gly Val Gln Val Tyr Leu	110		115		120
Pro Gly Gln Gly Glu Val Trp Tyr Asp Ile His Ser Tyr His Lys His	125		130		135
His Gly Pro His Thr Leu Tyr Leu Pro Val Thr Leu Ser Ser Ile Pro	140		145		150
Val Phe Gln Arg Gly Gly Thr Ile Val Pro Arg Trp Met Arg Val Arg	155		160		165
Arg Ser Ser Glu Cys Met Lys Asp Asp Pro Ile Thr Leu Pro Val Ala	170		175		180
Leu Ser Pro Gln Gly Thr Ala Gln Gly Glu Leu Phe Leu Asp Asp Gly	185		190		195
His Thr Phe Asn Tyr Gln Thr Arg Gln Glu Phe Leu Leu Arg Arg Ile	200		205		210
Ser Ile Ser Gly Asn Thr Leu Val Ser Ser Ser Ala Asp Pro His Gly	215		220		225
His Phe Glu Thr Pro Ile Trp Ile His Arg Val Val Ile His Gly Ala	230		235		240
Gly Lys Pro Ala Ala Val Val Leu His Thr Lys Gly Ser Pro His Ser	245		250		255

Q

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[illegible][illegible][illegible][illegible]

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%211: 11
%212: 659
%213: 1005
%214: Home - 10/10/1994

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<210> 18  
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 <212> DNA  
 <213> Homo sapiens

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<210> 16  
 <211> 790  
 <212> DNA  
 <213> Homo sapiens

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32

[illegible]

15

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1. The first step is to identify the key components of the system. This includes understanding the hardware, software, and data involved.

$\frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx = \frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx$

[illegible]

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Ala Arg Val Leu Leu Val Pro Asp Asn Thr Phe Pro Leu Gly Tyr Tyr
160      165      170
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Leu Ile Pro Phe Thr Gly Ile Val Gly Leu Leu Val Leu Ala Met Gly
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Ala Val Met Ile Ala Arg Cys Ile Gln His Arg Lys Arg Leu Gln Arg
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Asn Arg Leu Thr Lys Glu Gln Leu Lys Gln Ile Pro Thr His Asp Tyr
205      210      215
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Gln Lys Gly Asp Gln Tyr Asp Val Tyr Ala Ile Tyr Leu Asp His Tyr
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Val Val Phe Leu Gly Val Gly Leu Trp Ala Trp Ser Gly Lys Gly Val						6460
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His His His His His His His His His His His His His						6470
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Phe Asn Cys Ser Gly Ala Ser Tyr Ser Arg Glu Lys Cys Gly Val Pro						6530
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His His His His His His His His His His His His His						6540
Phe Ser Cys Cys Val Pro Asp Pro Ala Glu Lys Val Val Asn Thr Glu						6550
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His His His His His His His His His His His His His						6560
Cys Gly Tyr Asp Val Arg Ile Glu Leu Lys Ser Lys Trp Asp His Val						6570

[illegible]
$$\begin{aligned} \langle 2, 1, 0 \rangle &= 2.9 \\ \langle 1, 1, 1 \rangle &= 1.95 \\ \langle 2, 1, 2 \rangle &= 3.44 \\ \langle 2, 1, 0 \rangle &= 11.04, \quad m_1 = 2, m_2 = 1, m_3 = 0 \end{aligned}$$
$$\begin{aligned} \langle \hat{L}_z \rangle &= \langle \hat{L}_z \rangle_{\text{class}} \\ \langle \hat{L}_x \rangle &= \langle \hat{L}_x \rangle_{\text{class}} \\ \langle \hat{L}_y \rangle &= \langle \hat{L}_y \rangle_{\text{class}} \end{aligned}$$
[illegible]



His	Ser	Leu	Pro	His	Tyr	Leu	Gly	Ala	Leu	Glu	Asn	Leu	Asp	Tyr	Pro	100
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Arg	Ala	Arg	Met	Ala	Leu	Trp	Cys	Ala	Thr	Asp	His	Asn	Val	Asp	Asn	144
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Thr	Thr	Glu	Met	Leu	Glu	Glu	Trp	Leu	Ala	Ala	Val	Gly	Asp	Asp	Tyr	145
				80					85					90		
Ala	Ala	Val	Val	Trp	Arg	Pro	Glu	Gly	Glu	Pro	Arg	Phe	Tyr	Pro	Asp	147
				95				100					105			
Glu	Glu	Gly	Pro	Lys	His	Trp	Thr	Lys	Glu	Arg	His	Gln	Phe	Leu	Met	148
		110				115					120					
Glu	Leu	Lys	Gln	Glu	Ala	Leu	Thr	Phe	Ala	Arg	Asn	Trp	Gly	Ala	Asp	149
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Tyr	Ile	Leu	Phe	Ala	Asp	Thr	Asp	Asn	Ile	Leu	Thr	Asn	Asn	Gln	Thr	154
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Leu	Arg	Leu	Leu	Met	Gly	Gln	Gly	Leu	Pro	Val	Val	Ala	Pro	Met	Leu	155
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Asp	Ser	Gln	Thr	Tyr	Tyr	Ser	Asn	Ile	Trp	Cys	Gly	Ile	Thr	Pro	Gln	156
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Gly	Tyr	Thr	Arg	Arg	Thr	Ala	Glu	Tyr	Ile	Pro	Thr	Lys	Asn	Asn	Gln	157
				185				190					195			
Arg	Arg	Gly	Cys	Phe	Arg	Val	Pro	Met	Val	His	Ser	Thr	Phe	Leu	Ala	158
				200				210								
Ser	Leu	Arg	Ala	Glu	Gly	Ala	Asp	Gln	Leu	Ala	Phe	Tyr	Pro	Pro	His	159
				215				220								
Ile	Asn	Tyr	Thr	Trp	Pro	Ile	Asp	Asp	Ile	Ile	Val	Phe	Ala	Tyr	Ala	160
				225				230								
Lys	Gln	Ala	Ala	Gly	Val	Ser	Val	His	Val	Tyr	Asn	Gln	His	Asn	Tyr	161
				235				240								
Gly	Tyr	Met	Asn	Val	Pro	Val	Lys	Ser	His	Gln	Gly	Leu	Gln	Asp	Gln	162
				245				250								
Arg	Val	Asn	Phe	Ile	His	Leu	Ile	Leu	Ala	Leu	Val	Asp	Gly	Pro		163
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Arg	Met	Gln	Ala	Ser	Ala	His	Val	Thr	Arg	Pro	Ser	Lys	Arg	Pro	Ser	164
				265				270								
Lys	Ile	Gly	Phe	Asp	Gln	Val	Phe	Val	Ile	Ser	Leu	Ala	Arg	Arg	Pro	165
				275				280								
Asp	Arg	Arg	Gln	Arg	Met	Leu	Ala	Ser	Leu	Trp	Glu	Met	Glu	Ile	Ser	166
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Gly	Arg	Val	Val	Asp	Ala	Val	Asp	Gly	Trp	Met	Leu	Asn	Ser	Ser	Ala	167
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Ala	Val	Met	Gln	Ala	Val	Thr	Arg	Pro	Val	Thr	Arg	Pro	Val	Thr	Arg	168
				305				310								



22115 (27-11-1981)

1400-16

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Thr Gly Cys Cys Thr Tyr Tyr Tyr Glu Leu Trp Trp Phe Trp Leu Leu  
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22115 (27-11-1981)

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Leu Gln Asp Asp Lys Thr Ser Ser Ile Thr Arg Phe Lys Lys Arg Leu	
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Tyr Met Trp Arg Gly Leu Ile Ile Leu Ile Phe Ile Ile Ile Ile Gly	





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 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400  
 121 131 141 151 161 171 181 191 201 211 221 231 241 251 261 271 281 291 301  
 Asp Pro Glu Thr Ser Val Leu Val Leu Arg Lys Pro Gly Ile Asn Val  
 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420  
 126 136 146 156 166 176 186 196 206 216 226 236 246 256 266 276 286 296 306  
 111 121 131 141 151 161 171 181 191 201 211 221 231 241 251 261 271 281 291 301  
 Gln Trp Ser Asp Trp Ser Ile His Leu Arg  
 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 905 910 915 920 925 930 935 940 945 950 955 960 965 970 975 980 985 990 995 1000

<210> 31  
 <211> 1124  
 <212> DNA  
 <213> H m: complete

<214>  
 <215> 112  
 <216> 11 1111 11

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthaler and Whistler (1972). The total chlorophyll content was determined by the method of Arar and Cook (1980). The carotenoid content was determined by the method of Lichtenthaler and Whistler (1972). The total carotenoid content was determined by the method of Arar and Cook (1980). The total protein content was determined by the method of Lowry et al. (1951). The total lipid content was determined by the method of Bligh and Dyer (1959). The total carbohydrate content was determined by the method of Dubois and Gilles (1950). The total nucleic acid content was determined by the method of Burton (1956). The total ash content was determined by the method of AOAC (1990). The total moisture content was determined by the method of AOAC (1990). The total dry matter content was determined by the method of AOAC (1990). The total organic acid content was determined by the method of AOAC (1990). The total alkaloid content was determined by the method of AOAC (1990). The total saponin content was determined by the method of AOAC (1990). The total tannin content was determined by the method of AOAC (1990). The total flavonoid content was determined by the method of AOAC (1990). The total phenolic content was determined by the method of AOAC (1990). The total terpenoid content was determined by the method of AOAC (1990). The total steroid content was determined by the method of AOAC (1990). The total glycoside content was determined by the method of AOAC (1990). The total alkaloid content was determined by the method of AOAC (1990). The total saponin content was determined by the method of AOAC (1990). The total tannin content was determined by the method of AOAC (1990). The total flavonoid content was determined by the method of AOAC (1990). The total phenolic content was determined by the method of AOAC (1990). The total terpenoid content was determined by the method of AOAC (1990). The total steroid content was determined by the method of AOAC (1990). The total glycoside content was determined by the method of AOAC (1990).

14900-31  
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 Thr Ala Ala Leu Ala Val Ala Pro Gly Pro Arg Phe Leu Val Thr Ala  
 20 25 30  
 Leu Gly Ile Ile Arg Pro Gly Gly Asn Val Thr His Gly Val His Leu  
 35 40 45  
 Leu Ala His Lys Leu Ser His Val Thr Val Lys Ala His Leu Leu Lys  
 50 55 60  
 Thr Ala Ser Asn Leu Thr Val Ser Val Leu His Ala His Gly Val Phe  
 65 70 75 80





[illegible]

Leu Gly Tyr Arg Lys Tyr Gln Pro Asn Ile Asp Val Gln Glu Ser Ile  
 1060 1065 1070  
 His Phe Leu Glu Ser Glu Phe Ser Arg Gly Ile Ser Asp Asn Tyr Thr  
 1075 1080 1085  
 Leu Ala Leu Ile Thr Tyr Ala Leu Ser Ser Val Gly Ser Pro Lys Ala  
 1090 1095 1100  
 Lys Glu Ala Leu Asn Met Leu Thr Trp Arg Ala Glu Gln Glu Gly Gly  
 1105 1110 1115 1120  
 Met Gln Phe Trp Val Ser Ser Glu Ser Lys Leu Ser Asp Ser Trp Gln  
 1125 1130 1135  
 Pro Arg Ser Leu Asp Ile Glu Val Ala Ala Tyr Ala Leu Leu Ser His  
 1140 1145 1150  
 Phe Leu Gln Phe Gln Thr Ser Glu Gly Ile Pro Ile Met Arg Trp Leu  
 1155 1160 1165  
 Ser Arg Gln Arg Asn Ser Leu Gly Gly Phe Ala Ser Thr Gln Asp Thr  
 1170 1175 1180  
 Thr Val Ala Leu Lys Ala Leu Ser Gln Phe Ala Ala Leu Met Asn Thr  
 1185 1190 1195  
 Glu Arg Thr Asn Ile Gln Val Thr Val Thr Gly Pro Ser Ser Pro Ser  
 1200 1205 1210 1215  
 Pro Val Lys Phe Leu Ile Asp Thr His Asn Arg Leu Leu Leu Gln Thr  
 1220 1225 1230  
 Ala Glu Leu Ala Val Val Gln Pro Thr Ala Val Asn Ile Ser Ala Asn  
 1235 1240 1245  
 Gly Phe Gly Phe Ala Ile Cys Gln Leu Asn Val Val Tyr Asn Val Lys  
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 Ala Ser Gly Ser Ser Arg Arg Arg Ser Ile Gln Asn Val Ala Ala  
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 Phe Asp Leu Asp Val Ala Val Lys Ala Asn Lys Asp Asp Leu Asn His  
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 Val Asp Leu Asn Val Cys Thr Ser Phe Ser Gly Pro Gly Arg Ser Gly  
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 Glu Ala Ile Ser Leu Ser Glu Thr Val Lys Lys Val Glu Tyr Asp His  
 1330 1335 1340  
 Gly Lys Leu Asn Leu Tyr Leu Asp Ser Val Asn Gln Thr Ala Phe Tyr  
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 Ala Ser Val Ser Ile Val Asp Tyr Lys Glu Pro Arg Arg Glu Ala Val  
 1380 1385 1390  
 Arg Ser Tyr Asn Ser Glu Val Lys Leu Ser Ser Cys Asp Leu Lys Ser  
 1395 1400 1405  
 Asp Val Gln Gly Lys Arg Pro Cys Glu Asp Gly Ala Ser Gly Val His  
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 His His Ser Ser Val Ile Phe Ile Phe Cys Phe Lys Leu Leu Tyr His  
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 Met Glu Leu Trp Leu  
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 <12> ERT  
 <13> Hemo saplons

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Arg Ala Ser Pro Ala Gly Gly Pro Leu Gln Asp Val Val Ile Gln Arg  
 35 40 45  
 Tyr His Ile Pro Arg Ala Cys Pro Arg Glu Val Gln Met Gly Asp His  
 50 55 60  
 Val Arg Tyr His Tyr Asn Gly Thr Phe Glu Asp Gly Lys Lys Phe Arg  
 65 70 75  
 Ser Ser Tyr Asp Arg Asn Thr Leu Val Ala Ile Val Val Gly Val Gly  
 80 85 90  
 Arg Leu Ile Thr Gly Met Asp Arg Gly Leu Met Gly Met Cys Val Asn  
 95 100 105  
 Glu Arg Arg Arg Leu Ile Val Pro Pro His Leu Gly Tyr Gly Ser Ile  
 110 115 120 125  
 Gly Leu Ala Gly Leu Ile Pro Pro Asp Ala Thr Leu Tyr Phe Asp Val  
 130 135 140  
 Val Leu Leu Asp Val Trp Asn Lys Glu Asp Thr Val Val Val Ser Thr  
 145 150 155 160  
 Leu Leu Arg Pro Pro His Cys Pro Arg Met Val Gln Asp Gly Asp His  
 165 170 175  
 Val Arg Tyr His Tyr Asn Gly Thr Leu Leu Asp Gly Thr Ser Phe Asp  
 180 185 190  
 Thr Ser Tyr Ser Lys Gly Gly Thr Tyr Asp Thr Tyr Val Gly Ser Gly  
 195 200 205  
 Thr Leu Ile Lys Gly Met Asp Gln Gly Leu Leu Gly Met Cys Pro Gly  
 210 215 220  
 His Arg Arg Lys Ile Ile Ile Pro Phe Phe Leu Ala Tyr Gly Glu Lys  
 225 230 235 240  
 Gly Tyr Gly Thr Val Ile Pro Pro Gln Ala Ser Leu Val His His Val  
 245 250 255  
 Leu Leu Ile Asp Val His Asn Pro Lys Asp Ala Val Val Leu Glu Thr  
 260 265 270  
 Leu Glu Leu Pro Pro Gly Cys Val Arg Arg Ala Gly Ala Gly Asp His  
 275 280 285  
 Met Arg Tyr His Tyr Asn Gly Ser Leu Met Asp Gly Thr Leu Phe Asp  
 290 295 300  
 Ser Ser Tyr Ser Arg Asn His Thr Tyr Asn Thr Tyr Ile Gly Gln Gly  
 305 310 315  
 Tyr Ile Ile Pro Gly Met Asp Gln Gly Leu Gln Gly Ala Tyr Met Gly  
 320 325 330  
 Glu Arg Arg Arg Ile Thr Ile Pro Ile His Leu Ala Tyr Gly Glu Asn  
 335 340 345  
 Gly Thr Gly Arg Lys Ile Pro Gly Ser Ala Val Leu Ile His Asn Val  
 350 355 360  
 His Val Ile Asp Phe His Asn Pro Ala Asp Val Val Glu Ile Arg Thr  
 365 370 375  
 Leu Ser Arg Pro Ser His Thr Cys Asn Glu Thr Thr Lys Leu Gly Asp  
 380 385 390  
 His Val Arg Tyr His Tyr Asn Cys Ser Leu Leu Asp Gly Thr Glu Leu  
 395 400 405  
 Phe Thr Ser His Asp Tyr Gly Ala Ile Glu Glu Ala Thr Leu Gly Ala  
 410 415 420  
 Asn Lys Val Ile Glu Gly Leu Asp Thr Gly Leu Gln Gly Met Cys Val  
 425 430 435  
 Gly Glu Arg Arg Gln Leu Ile Val Pro Pro His Leu Ala His Gly Glu  
 440 445 450  
 Ser Gly Ala Arg Gly Val Pro Gly Ser Ala Val Leu Leu Phe Glu Val  
 455 460 465  
 Glu Leu Val Ser Arg Glu Asp Gly Leu Pro Thr Gly Tyr Leu Ile Val  
 470 475 480  
 Thr His Lys Arg Pro Ile Ala Asn Leu Ile His Arg Met Arg Leu Asn  
 485 490 495  
 Lys Asp Gly Glu Val Pro Pro His Glu Pro Thr Thr Ile Ile Lys Ala

515 520 525  
 Gln Val Ser Glu Gly Lys Gly Arg Leu Met Pro Gly Gln Asp Pro Arg  
 530 535 540  
 Lys Thr Ile Gly Asp Met Phe Gln Asn Gln Asp Arg Asn Gln Asp Gly  
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 Lys Ile Thr Val Asp Glu Leu Lys Leu Lys Ser Asp Glu Asp Gln Arg  
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 Arg Val His Glu Glu Leu  
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<210> 33  
 <211> 410  
 <212> PRT  
 <213> Homo sapiens

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 Pro Val Gly Phe Cys Leu Leu Val Leu Arg Leu Phe Leu Gly Ile His  
 35 40 45  
 Val Phe Leu Val Ser Cys Ala Leu Pro Asp Ser Val Leu Arg Arg Phe  
 50 55 60  
 Val Val Arg Thr Met Cys Ala Val Leu Gly Leu Val Ala Arg Gln Arg  
 65 70 75 80  
 Asp Ser Gly Leu Arg Asp His Ser Val Arg Val Leu Ile Ser Asn His  
 85 90 95  
 Val Thr Pro Phe Asp His Asn Ile Val Asn Leu Leu Thr Thr Cys Ser  
 100 105 110  
 Thr Pro Leu Leu Asn Ser Pro Pro Ser Phe Val Cys Trp Ser Arg Gly  
 115 120 125  
 Phe Met Glu Met Asn Gly Arg Gly Gln Leu Val Glu Ser Leu Lys Arg  
 130 135 140  
 Phe Cys Ala Ser Thr Arg Leu Pro Pro Thr Pro Leu Leu Leu Phe Pro  
 145 150 155 160  
 Glu Glu Glu Ala Thr Asn Gly Arg Gln Gly Leu Leu Arg Phe Ser Ser  
 165 170 175  
 Trp Pro Phe Ser Ile Gln Asp Val Val Gln Pro Leu Thr Leu Gln Val  
 180 185 190  
 Gln Arg Pro Leu Val Ser Val Thr Val Ser Asp Ala Ser Trp Val Ser  
 195 200 205  
 Glu Leu Leu Trp Ser Leu Phe Val Pro Phe Thr Val Tyr Gln Val Arg  
 210 215 220  
 Trp Leu Arg Pro Val His Arg Gln Leu Gly Glu Ala Asn His Gln Phe  
 225 230 235 240  
 Ala Leu Arg Val Gln Gln Leu Val Ala Lys Glu Leu Gly Gln Thr Gly  
 245 250 255  
 Thr Arg Leu Thr Pro Ala Asp Lys Ala Gln His Met Lys Arg Gln Arg  
 260 265 270  
 His Pro Arg Leu Arg Pro Gln Ser Ala Gln Ser Ser Phe Pro Pro Ser  
 275 280 285  
 Pro Gly Pro Ser Pro Asp Val Gln Leu Ala Thr Leu Ala Gln Arg Val  
 290 295 300  
 Lys Glu Val Leu Pro His Val Pro Leu Gly Val Ile Gln Arg Asp Leu  
 305 310 315 320  
 Ala Lys Thr Gly Cys Val Asp Leu Thr Ile Thr Asn Leu Leu Gln Gly  
 325 330 335  
 Ala Val Ala Phe Met Pro Glu Asp Ile Thr Lys Gly Thr Gln Ser Leu  
 340 345 350  
 Pro Thr Ala Ser Ala Ser Lys Phe Pro Ser Ser Gly Pro Val Thr Pro

361 362 363  
 Val Pro Thr Ala Leu Thr Phe Ala Lys Ser Ser Tyr Ala Arg His Ala  
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 Phe Thr Glu Arg Arg Ala Glu Glu Ala Asp  
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<210> 34  
 <211> 443  
 <212> PRT  
 <213> Homo sapiens

<470> 34  
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 35 40 45  
 Gly Thr His Phe Ser Leu Pro Thr Thr Gly Val Leu Tyr Lys His Arg  
 50 55  
 Asn Tyr Val Ile Met Thr Thr Ala His Lys Ala Lys Tyr Lys Lys Ile  
 60 65 70 75  
 Leu Pro Leu Val Thr Ser Gly Asp Glu Glu His Ser Lys Asp Tyr Lys  
 80 85 90  
 Gly Pro Asn Pro Arg Glu Leu Leu His Pro Leu Phe Lys His Ser Ser  
 95 100 105  
 Cys Ser Tyr Arg Ile Glu Ser Tyr Trp Thr Tyr His Val Tyr His Gly  
 110 115 120 125  
 Lys His Ile Arg His Tyr His Glu His Lys His Thr Gly His Lys Ile  
 130 135 140  
 Asn Ile His Glu Tyr Tyr Leu Gly Asn Met Leu Ala Lys Asn Leu Leu  
 145 150 155 160  
 Phe Glu Lys Glu Arg Glu Ala Glu Glu Lys Glu Lys Ser Asn His Ile  
 165 170 175 180  
 Pro Thr Lys Asn Ile Glu Gly Glu Met Thr Pro Tyr Tyr Ile Val Gly  
 185 190 195 200  
 Met Gly Asn Gly Thr Pro Cys Ser Leu Lys His Asn Arg His Arg Ser  
 205 210 215 220  
 Ser Thr Val Met Tyr Ile Cys His Ile His Ser Lys His Thr Ile Leu  
 225 230 235 240  
 Ser Val Ala Ser Val Thr Thr Cys Glu Tyr His Val Val Ile Leu Thr  
 245 250 255 260  
 Pro Leu Leu Cys Ser His Pro Lys Tyr Arg Phe Arg Ala Ser Pro Val  
 265 270 275 280  
 Asn Asp Ile Phe Cys Glu Ser Leu Pro Gly Ser His Phe Lys Ile Leu  
 285 290 295 300  
 Thr Leu Arg Glu Leu Glu His His Glu His Ile Leu Arg Val Pro Phe  
 305 310 315 320  
 Arg Arg Asn Lys Glu Glu Asp Leu His Ser Thr Lys His Arg Arg Phe  
 325 330 335 340  
 Pro Ala Ile His Lys Ser Ile Ala Ile Gly Ser Glu Pro Val Leu Thr  
 345 350 355 360  
 Val Gly Thr Thr His Ile Ser Lys Leu Thr Asp Asp His Leu Ile Lys  
 365 370 375 380  
 Glu Phe Leu Ser Gly Ser Tyr Cys Phe Arg Gly Gly Val Gly Trp Trp  
 385 390 395 400  
 Lys Tyr Glu Phe Cys Tyr Gly Lys His Val His His Tyr His His Asn  
 405 410 415 420  
 Lys Asp Ser Gly Lys Thr Pro Val Val Val Gly Thr Trp Asn His Glu

371 372 370  
 Glu His Ile Glu Trp Ala Lys Lys Asn Thr Ala Arg Ala Tyr His Leu  
 385 390 395 4  
 Ala Asp Asp Gly Thr Glu Thr Val Arg Met Val Ser His Phe Tyr Gly  
 405 410 415  
 Asn Gly Asp Ile Cys Asp Ile Thr Asp Lys Pro Arg Glu Val Thr Val  
 420 425 430  
 Lys Leu Lys Cys Lys Glu Ser Asp Ser Pro His Ala Val Thr Val Tyr  
 435 440 445  
 Met Leu Glu Pro His Ser Cys Glu Tyr Ile Leu Gly Val Glu Ser Pro  
 450 455 460  
 Val Ile Cys Lys Ile Leu Asp Thr Ala Asp Glu Asn Gly Leu Leu Ser  
 465 470 475 480  
 Leu Ser Asn

-212- AL  
 -211- AL  
 -212- 18T  
 -213- Homo sapiens

470- AL  
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 Leu His Phe Leu Leu Pro Ile Phe Leu Ala Ala Val Pro Ala His Arg  
 14 14 14 14  
 Tyr Ala Leu Pro Gly Ala Pro Ala Asn Phe Ser His Glu Asp Val Trp  
 54 54 54 54  
 Leu Glu Ala His Leu Pro Arg Glu Pro Asp Gly Thr Leu Ser Ser Cys  
 65 70 75 80  
 Leu Arg Phe Ala Tyr Pro Glu Ala Leu Pro Asn Thr Thr Leu Gly Glu  
 85 90 95 100  
 Glu Arg Glu Ser Arg Gly Glu Leu Glu Asp Glu Pro Ala Thr Val Pro  
 100 105 110 115  
 Tyr Ser Glu Gly Trp Ala Tyr Asp His Ser Glu Phe Ser Ser Thr Ile  
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 Ala Thr Ala Ser Glu Val Gly Ile Tyr Ile Ile His Leu Ser Val Glu  
 14 14 14 14  
 Tyr Arg Trp Arg Glu Ser Pro Trp Glu Ala Ala Gly Arg Gly Leu Pro  
 143 150 155 160  
 Trp Glu Glu Ala Ala Ala Gly Leu Gly Arg Asp Lys Val Ser Tyr  
 161 161 161 161  
 Ser Pro Ser Trp Arg Glu Ser Leu Gly Gly Leu Leu Ser Gly Met Glu  
 161 165 170 175  
 Trp Asp Leu Val Cys Glu Glu Lys Gly Leu Asn Arg Ala Ala Ser Thr  
 171 171 171 171  
 Phe Phe Phe Ala Gly Val Leu Val Gly Ala Val Ala Phe Gly Tyr Leu  
 21 21 21 21  
 Ser Asp Arg Phe Gly Arg Arg Arg Leu Leu Leu Val Ala Tyr Val Ser  
 223 230 235 240  
 Thr Leu Val Leu Gly Leu Ala Ser Ala Ala Ser Val Ser Tyr Val Met  
 243 243 243 243  
 Phe Ala Ile Thr Arg Thr Leu Thr Gly Ser Ala Leu Ala Gly Phe Thr  
 260 265 270  
 Ile Ile Val Met Pro Leu Glu Leu Glu Trp Leu Asp Val Glu His Arg  
 271 271 271 271  
 Thr Val Ala Gly Val Leu Ser Ser Thr Phe Trp Thr Gly Gly Val Met  
 271 271 271 271  
 Leu Leu Ala Leu Val Gly Tyr Leu Ile Arg Asp Trp Arg Trp Leu Leu

308 310 312 314  
 Leu Ala Val Thr Leu Pro Cys Ala Pro Gly Ile Leu Ser Leu Trp Trp  
 316 318 320 322  
 Val Pro Glu Ser Ala Arg Trp Leu Leu Thr Gln Gly His Val Lys His  
 324 326 328 330  
 Ala His Arg Tyr Leu Leu His Cys Ala Arg Leu Asn Gly Arg Pro Val  
 332 334 336 338  
 Cys Glu Asp Ser Phe Ser Gln Glu Ala Val Ser Lys Val Ala Ala Lys  
 340 342 344 346  
 Glu Arg Val Val Arg Arg Pro Ser Tyr Leu Asp Leu Phe Arg Thr Pro  
 348 350 352 354  
 Arg Leu Arg His Ile Ser Leu Cys Cys Val Val Val Trp Phe Gly Val  
 356 358 360 362  
 Asn Phe Ser Tyr Tyr Gly Leu Ser Leu Asp Val Ser Gly Leu Gly Leu  
 364 366 368 370  
 Asn Val Tyr Gln Thr Gln Leu Leu Phe Gly Ala Val Glu Leu Pro Ser  
 372 374 376 378  
 Lys Leu Leu Val Tyr Leu Ser Val Arg Tyr Ala Gly Arg Arg Leu Thr  
 380 382 384 386  
 Gln Ala Gly Thr Leu Leu Gly Thr Ala Leu Ala Phe Gly Thr Arg Leu  
 388 390 392 394  
 Leu Val Ser Ser Asp Met Lys Ser Trp Ser Thr Val Leu Ala Val Met  
 396 398 400 402  
 Gly Lys Ala Phe Ser Glu Ala Ala Phe Thr Thr Ala Tyr Leu Thr Thr  
 404 406 408 410  
 Ser Glu Leu Tyr Pro Thr Val Leu Arg Phe Thr Gly Met Gly Leu Thr  
 412 414 416 418  
 Ala Leu Val Gly Arg Leu Gly Gly Ser Leu Ala Pro Leu Ala Ala Leu  
 420 422 424 426  
 Leu Asp Gly Val Trp Leu Ser Leu Pro Lys Leu Thr Tyr Gly Gly Leu  
 428 430 432 434  
 Ala Leu Leu Ala Ala Gly Thr Ala Leu Leu Leu Pro Glu Thr Arg Gln  
 436 438 440 442  
 Ala Gln Leu Pro Glu Thr Ile Gln Asp Val Glu Arg Lys Ser Ala Pro  
 444 446 448 450  
 Thr Ser Leu Gln Glu Glu Glu Met Pro Met Lys Glu Val Glu Asn  
 452 454 456 458

421-434  
 421-434  
 421-434  
 421-434

441-454  
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 Gly Leu Arg Lys Pro Glu Ser Gln Gln Ala Ala Pro Leu Ser Gly Pro  
 464 466 468 470  
 Tyr Gly Arg Arg Val Ile Thr Ser Arg Ile Val Gly Gly Glu Arg Ala  
 472 474 476 478  
 Glu Leu Gly Arg Trp Pro Trp Gln Gly Ser Leu Arg Leu Trp Asp Leu  
 480 482 484 486  
 His Val Cys Gly Val Ser Leu Leu Ser His Arg Trp Ala Leu Thr Ala  
 488 490 492 494  
 Ala His Cys Phe Glu Thr Tyr Ser Asp Leu Ser Asp Pro Ser Gly Trp  
 496 498 500 502  
 Met Val Gln Phe Gly Glu Leu Thr Ser Met Pro Ser Phe Trp Ser Leu  
 504 506 508 510  
 Glu Ala Tyr Tyr Thr Arg Tyr Ile Val Ser Asn Ile Tyr Leu Leu Pro  
 512 514 516 518  
 Arg Tyr Leu Gly Asn Ser Pro Tyr Arg Ile Ala Leu Val Tyr Leu Ser



130 135 140  
 Ala Pro Val Thr Tyr Thr Lys His Ile Glu Ser Ile Cys Leu Glu Ala  
 145 150 155 160  
 Ser Thr Phe Glu Phe Glu Asn Arg Thr Asp Cys Trp Val Thr Gly Trp  
 165 170 175 180  
 Gly Tyr Ile Lys Glu Asp Glu Ala Leu Pro Ser Pro His Thr Leu His  
 185 190 195 200  
 Glu Val Glu Val Ala Ile Ile Asn Asn Ser Met Cys Asn His Leu Ile  
 205 210 215 220  
 Leu Lys Tyr Ser Phe Arg Lys Asp Ile Phe Gly Asp Met Val Cys Ala  
 225 230 235 240  
 Gly Asn Ala Glu Gly Gly Lys Asp Ala Cys Phe Gly Asp Ser Gly Gly  
 245 250 255 260  
 Pro Leu Ala Cys Asn Lys Asn Gly Leu Trp Tyr Glu Ile Gly Val Val  
 265 270 275 280  
 Ser Trp Gly Val Gly Cys Gly Arg Pro Asn Arg Pro Gly Val Tyr Thr  
 285 290 295 300  
 Asn Ile Ser His His Phe Glu Trp Ile Glu Lys Leu Met Ala Glu Ser  
 305 310 315 320  
 Gly Met Ser Glu Pro Asp Pro Ser Trp Pro Leu Leu Phe Pro Pro Leu  
 325 330 335 340  
 Leu Trp Ala Leu Pro Leu Leu Gly Pro Val  
 345 350 355 360

<211> 37  
 <211> 44  
 <211> EPT  
 <211> Homo sapiens

<411> 37  
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 35 40 45  
 Ala Ile Val Ser Ala Gly Asp Thr Ser Val Leu His Leu Gly His Val  
 50 55 60  
 Asp His Leu Val Ala Gly Glu Gly Asn Pro Glu Pro Thr Val Leu Pro  
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 His Pro Ser Glu Ala Asn Thr Ser Leu Asp Lys Lys Ala Arg  
 85 90 95 100

<211> 34  
 <211> 31  
 <211> EPT  
 <211> Homo sapiens

<411> 37  
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 35 40 45  
 Asp Ile Pro Val Pro Tyr Leu Tyr Phe Asp Met Gly Ala Ala Val Leu  
 50 55 60  
 Cys Ala Ser Phe Met Ser Phe Gly Val Lys Arg Arg Trp Phe Ala Leu  
 65 70 75 80  
 Gly Ala Ala Leu Glu Leu Ala Ile Ser Thr Tyr Ala Ala Tyr Ile Gly  
 85 90 95 100

Gly Tyr Val His Tyr Gly Asp Trp Leu Lys Val Arg Met Tyr Ser Arg  
 128 131 132  
 Thr Val Ala Ile Ile Gly Gly Leu Ser Cys Val Gly Gln Arg Cys Thr  
 133 134 135  
 Gly Ala Val Pro Pro Glu Thr Ser Gln Pro Leu Pro Ala Val His Arg  
 136 137 138  
 Pro Gly Val Pro Gly Tyr Leu Pro His Leu Cys Gly Leu Leu Thr Ala  
 139 140 141  
 Ala Gln Ala Gly Gly Pro Ala Gly Val Ser Glu Pro Ser Pro Arg Arg  
 142 143 144  
 Gly Ala Asp Asp Pro Ala Val Leu Arg Ala Val Trp His Pro Gly Pro  
 145 146 147  
 Gly Leu Ser Val Arg Leu Leu Arg Asp Pro Arg Cys Pro Asp Pro Gly  
 148 149 150  
 Cys Thr Ala Ala Pro Cys His Ala Ala His  
 151 152

153  
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Met Phe Thr Ile Lys Leu Leu Leu Ile Ile Val Pro Leu Val Ile Ser  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300

Gly Phe Gly Arg Leu Asp Gly Glu Phe Trp Leu Gly Leu Glu Lys Ile  
 335 310 315  
 Tyr Ser Ile Val Lys Glu Ser Asn Tyr Val Leu Arg Ile Glu Leu Glu  
 335 335 335  
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\*2100 41  
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411-46  
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411-1NA  
4218- Homo sapiens

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4213- Homo sapiens

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Thr	Asp	Asn	Arg	Leu	Gln	Ser	Thr	Leu	Lys	Thr	Leu	Ser	Ile	Ser	Phe	

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Pro Val Thr Leu Thr Ala Tyr Ile Val Thr Ser Leu Leu Gly Tyr Arg	1080	1085	1090
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Thr Tyr Ala Leu Ser Ser Val Gly Ser Pro Lys Ala Lys His Ala Leu	1140	1145	1150
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Lys	Asn	Leu	Leu	Phe	Gln	Lys	Gln	Arg	Gln	Ala	Gln	Gln	Lys	Gln	Lys		
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 Pro Thr Gly Ile Pro Val His Leu Glu Leu Ala Ser Met Thr Asn Arg  
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 Ser Gly Pro His Ser Ser Leu Ser Ser Trp Asn Gly Val Pro Asp Val  
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 375 380 385  
 Ala Ala Val Ala Ala Gly Ala Arg Val Ala Gly Thr Gln Ala Lys Ala  
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 Phe Met Thr Ser His Ser Gln Ala Gly Ser Arg Ile Val Leu Asn Ile  
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 Tyr 480 485 490

11-11-61  
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 11-11-61

11-11-61  
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Leu Ser Thr His Leu Leu Ile Leu Tyr	Gly Val Gln Gly Leu Leu Thr	
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Phe Gly Tyr Leu Val Leu Leu Ser His	Val Gly Gln Arg Met Ala Val	
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Asp Met Arg Arg Ala Leu Phe Ser Ser	Leu Leu Arg Tyr Lys Gln Pro	
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Thr Gly Gln Leu Val Ser Arg Leu Thr Thr	Asp Val Gln Gln Phe Lys	
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Leu Leu Leu Met Val Ala Thr Phe Ala Leu	Met Gly Val Gly Thr Leu	
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Leu	410	415

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Ser Ser Val Leu Ile Pro Phe Tyr Ala	Lys Leu Val Val Gly Ser Val	
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Ala Ile Val Tyr Phe Ala Arg Ser Tyr	Asp Gly Arg Phe Val Ile Asp	
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Ala Asp Leu Leu Cys Ala Leu Phe Phe	Leu Leu Ser Phe Leu Gly Tyr	
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Cys Lys Ala Phe Arg Gln Ser Asn Lys	Gln Gly Ala His Ser Ser Thr	
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Phe Trp Val Leu Leu Ser Ile Phe Leu	Gly Ala Val Ala Met Leu Cys	
530	535	540
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Pro Gly Thr Ser Gly Ser Cys Ser Gly Cys Gly Ser Leu Ser Leu Pro  
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Leu Leu Ala Gly Leu Val Ala Ala Asp Ala Val Ala Ser Leu Leu Ile  
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Val Leu Val Ala Leu Gly Asn Leu Gly Leu Leu Val Val Thr Leu Trp  
35 40 45  
Arg Arg Leu Ala Pro Gly Lys Asp Ala His Val Pro Ile Arg Val Val  
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His Val Leu Gly Met Val Gly Thr Ala Leu Leu Ala Ser Leu Trp His  
65 70 75  
His Val Ala Arg Val Ala Gly Asn Leu His Ser Val Ala Ser Leu Ala  
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95 100 105  
Leu Pro Phe Leu Ser His Leu Pro Pro Arg Phe Leu Arg Ser Phe Phe  
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Leu Gly Glu Gly Leu Ser Ala Leu Leu Pro Cys Val Leu Ala Leu Val  
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Gln Gly Val Gly Arg Leu Glu Cys Ser Ser Ala Ser Ile Asn Gly Thr  
140 145 150  
Pro Gly Pro Pro Leu Asp Phe Leu His Arg Phe Pro Ala Ser Thr Phe  
155 160 165  
Phe Trp Ala Leu Thr Ala Leu Leu Val Ala Ser Ala Ala Ala Phe Gln  
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Gly Leu Leu Leu Leu Pro Pro Pro Ser Val Pro Thr Gly Glu  
185 190 195  
Leu Gly Ser Gly Leu Gln Val Gly Ala Pro Gly Ala Glu Gln Glu Val  
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His Gln Ser Ser Arg Leu Gln Gln Arg Arg Ser His Ala Ala Gly Thr  
215 220 225  
His Pro Gly His Asp Arg Lys Ala Tyr His Leu Leu Ser Ala Arg Ser  
230 235 240







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 Lys His His Tyr Glu Val Ile Pro Pro Leu Thr Ser Pro Gly Gln Ile  
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 Gly Asp Met Asn Cys Thr Thr Gln Arg Ile Asn Tyr Thr Asp Pro Phe  
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 Gln His Arg Gly His Val Cys Tyr Leu Gly Val Cys Arg His His Arg  
 35 40 45 50  
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 Gly Glu Gly Gln Pro Arg Ala Pro Gly Pro Leu Gln Leu Trp Ala His  
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The diagram illustrates the experimental setup. A participant is seated at a table, looking at a video screen. A camera is positioned above the screen. A target is located on the screen. A horizontal arrow indicates the movement of the hand from the starting position to the target. A vertical arrow indicates the movement of the hand from the starting position to the target. A horizontal arrow indicates the movement of the hand from the starting position to the target. A vertical arrow indicates the movement of the hand from the starting position to the target.

[illegible]

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 (2.2)  $\mathcal{A} = \mathcal{A}_1 \oplus \mathcal{A}_2$   
 (2.3)  $\mathcal{A} = \mathcal{A}_1 \oplus \mathcal{A}_2$   
 (2.4)  $\mathcal{A} = \mathcal{A}_1 \oplus \mathcal{A}_2$

1. *Chlorophyll a* (Chl *a*)

[illegible]

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- 1912 - 1914
- 1915 - 1918
- 1919 - Homo sapiens

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1. *Chlorophyll a* (Chl *a*)

[illegible]





[illegible]

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1115-48  
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 1117-50

490-43  
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 135 ttt tat tgg aaa gta cac gtt cac ttt tggaaagat' tggagggat' 1038  
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1113- Homo sapiens

1114-

1115- CDS

1116- (220)... (2204)

1117- 84

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Asp His Ile Leu Pro Ser Ser Val Leu Pro Pro Phe Trp Ala Lys Leu	
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Ala Val Phe Asp Ile Leu Val Ile Gly Lys Phe Asn Val Leu Ala Ile	
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Val Phe Lys Val Leu His Lys Asp Lys Ser Leu Ile Asn Leu Gly Met	
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Phe Trp Ala Leu Thr Ala Leu Leu Val Ala Ser Ala Ala Ala Phe Gln 1620  
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90



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Tyr Phe Ala Val Asp Thr Met Tyr Val Gly Arg Lys Leu Gly Leu Leu  
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His Phe Pro Tyr Leu His Gln Asp Trp Gln Val His Tyr His Lys Arg  
95 100 105  
Thr Fr Val Ala Pro Arg Phe Asp Val Asn Ala Pro Asp Leu Tyr Ile  
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Pro Ala Met Ala Phe Ile Thr Tyr Val Leu Val Ala Gly Leu Ala Leu  
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Gly Leu Leu Phe Gly Lys Ile Gly Tyr Tyr Leu Val Leu Gly Tyr Tyr  
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Tyr Val Ala Ile Pro Val Phe Met Ile Arg Thr Leu Arg Leu Lys Ile  
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4210- PBT  
4213- Homo sapiens

44-30-94

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4210- 91  
4211- 194  
4212- PBT  
4213- Homo sapiens

44-10-91

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44-10-91









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1. *Journal of the American Medical Association*, 1997; 277: 1033-1037.

1. *Chlorophyll a* and *Chlorophyll b* (mg/g)

4.22. (102) ... (650)

« 400 » 134

[illegible]

Neurology 55:1033-1036, 2000

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6                  10                  18

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Thr Ala Pro Leu Leu Val Phe Leu Leu Ala Leu Tyr Phe Leu Phe Ala

Apr 21, May 10, Jan 24, Mar 24, Apr 14, Apr 24, May 14, May 24, May 31, Jun 10, Jun 20, Jun 24, Jun 30, Jul 10, Jul 20, Jul 24, Jul 30, Aug 10, Aug 20, Aug 24, Aug 30, Sep 10, Sep 20, Sep 24, Sep 30, Oct 10, Oct 20, Oct 24, Oct 30, Nov 10, Nov 20, Nov 24, Nov 30, Dec 10, Dec 20, Dec 24, Dec 30, 1971

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1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthaler and Whistler (1973). The *Chlorophyll a* and *Chlorophyll b* contents were expressed as  $\mu\text{g g}^{-1}$  of dry weight.

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Figure 1. The effect of the concentration of the  $\text{Ca}^{2+}$  solution on the  $\text{Ca}^{2+}$  uptake by *Chlorella* sp. (1000 cells  $\times 10^6$  ml $^{-1}$ ) in the presence of 100  $\mu\text{M}$  of  $\text{Ca}^{2+}$  solution. The cells were incubated in the  $\text{Ca}^{2+}$  solution for 10 min. The  $\text{Ca}^{2+}$  uptake was determined by measuring the radioactivity of the  $^{45}\text{Ca}^{2+}$  solution. The data were expressed as the mean  $\pm$  SD of three independent experiments.

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2025-24-4

1. *Chlorophyll a* (Chl *a*)

(213) Homo sapiens

4222

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1601 UV-Visible Spectrophotometer. The concentration of chlorophyll was expressed in  $\mu\text{g mL}^{-1}$ .

... ..

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthaler and Whistler (1973). The total chlorophyll content was determined by the method of Arar and Cook (1980). The carotenoid content was determined by the method of Lichtenthaler and Whistler (1973).

[illegible]





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Ala Phe Ala Glu Ala Arg Ala Arg Ala Trp Ala Gly Gly Met Gly Glu  
140 145 150  
Pro Arg Ala Arg Leu Val Val Pro Val Ala Val Ala Ala Thr Gly Val  
155 160 165  
Gly Gly Met Leu Glu Gly Cys Gly Tyr Glu Ala His Gly Gly Trp Gly  
170 175 180  
Cys Leu Gly Tyr Thr Leu Val Arg Glu Phe Ser Lys Asp Leu  
185 190 195

<113> 126

<113> 256  
<113> 387  
<113> Home sapiens

<400> 126

Met Asp Ala Arg Trp Trp Ala Val Val Val Leu Ala Ala Ihe Pro Leu  
1 5 10  
Leu Gly Ala Gly Gly Glu Thr Pro Glu Ala Pro Pro Glu Leu Trp Thr  
15 20 25  
Glu Leu Trp Ihe Phe Arg Phe Val Val Asn Ala Ala Gly Tyr Ala Leu  
30 35 40  
Phe Met Val Pro Gly Tyr Leu Leu Val Glu Tyr Phe Arg Arg Lys Asn  
45 50 55  
Tyr Leu Glu Thr Gly Arg Gly Leu Tyr Phe Pro Leu Val Lys Ala Tyr  
60 65 70  
Val Phe Gly Asn Glu Pro Lys Ala Ser Asp Glu Val Pro Leu Ala Pro  
75 80 85  
Arg Thr Glu Ala Ala Glu Thr Thr Pro Met Trp Glu Ala Leu Lys Leu  
90 95 100  
Leu Phe Cys Ala Thr Gly Leu Glu Val Ser Tyr Leu Thr Trp Gly Val  
105 110 115  
Leu Glu Glu Arg Val Met Thr Arg Ser Tyr Gly Ala Thr Ala Thr Ser  
120 125 130  
Pro Gly Glu Arg Phe Thr Asp Ser Glu Ihe Leu Val Leu Met Asn Arg  
135 140 145

Val Leu Ala Leu Ile Val Ala Gly Leu Ser Cys Val Leu Lys Lys His  
1x5 175 175  
Pro Arg His Gly Ala Pro Met Tyr Arg Tyr Ser Phe Ala Ser Leu Ser  
180 185 190  
Asn Val Leu Ser Ser Trp Cys Gln Tyr Gln Ala Leu Lys Phe Val Ser  
195 200 205  
Phe Pro Thr Gln Val Leu Ala Lys Ala Ser Lys Val Ile Pro Val Met  
210 215 220  
Leu Met Gly Lys Leu Val Ser Arg Arg Ser Tyr Gln His Thr Gln Tyr  
225 230 235  
Leu Thr Ala Thr Leu Ile Ser Ile Gly Val Ser Met Phe Leu Leu Ser  
240 245 250  
Ser Gly Pro Gln Pro Arg Ser Ser Pro Ala Thr Thr Leu Ser Gly Leu  
255 260 265  
Ile Leu Leu Ala Gly Tyr Ile Ala Phe Asp Ser Phe Thr Ser Asn Thr  
270 275 280  
Gln Asp Ala Leu Phe Ala Tyr Lys Met Ser Ser Val Gln Met Met Phe  
285 290 295  
Gly Val Asn Phe Phe Ser Cys Leu Ile Thr Val Gly Ser Leu Leu His  
300 305 310  
Gln Gly Ala Leu Leu Gln Gly Thr Arg Phe Met Gly Arg His Ser Gln  
315 320 325  
Phe Ala Ala His Ala Leu Leu Leu Ser Ile Cys Ser Ala Tyr Gly His  
330 335 340  
Leu Phe Ile Phe Tyr Thr Ile Gly Gln Phe Gly Ala Ala Val Phe Thr  
345 350 355  
Ile Ile Met Thr Leu Arg Gln Ala Phe Ala Ile Leu Leu Ser Cys Leu  
360 365 370  
Leu Tyr Gly His Thr Val Thr Val Val Gly Gly Leu Gly Val Ala Val  
375 380 385  
Val Phe Ala Ala Leu Leu Leu Arg Val Tyr Ala Arg Gly Arg Leu Lys  
390 395 400  
Gln Arg Gly Lys Lys Ala Val Pro Val Gln Ser Pro Val Gln Lys Val  
405 410 415  
420 425 430

\*111-1117  
\*111-1118  
\*111-1119  
\*111-1120

\*111-1121  
Met Gly His Arg Thr Leu Val Leu Pro Trp Val Leu Leu Thr Leu Tyr  
1 11  
Val Thr Ala Gly Thr Pro Ala Val Trp Val Gln Val Arg Met Gln Ala  
12 13  
Thr Gln Leu Ser Ser Phe Thr Ile Arg Cys Gly Ile Leu Gly Ser Gly  
14 15  
Ser Ile Ser Leu Val Thr Val Ser Trp Gly Gly Ser Arg Gly Ala Gly  
16 17  
Gly Thr Thr Leu Ala Val Leu His Trp His Arg Gly Ile Arg His Thr  
18 19  
Ala Pro Ala Arg Gln Ala Arg Trp Gln Thr Gln Ser Ser Ile Ser Leu  
20 21  
Ile Leu Gln Gly Ser Gly Ala Ser Ser Pro Cys Ala Asn Thr Thr Phe  
22 23  
Cys Cys Lys Phe Ala Ser Phe Pro Gln Gly Ser Trp Gln Ala Cys Gly  
24 25  
Ser Leu Pro Ser Ser Ser Arg Phe Gly Leu Ser Ala Ser Ser Thr Ser  
26 27  
Ala Pro Ile Leu Arg Ala Arg Leu Ala Gly Ile Leu Gly Val Ser Gly  
28 29



Val Leu Leu Phe Gly Cys Val Tyr Leu Leu His Leu Leu Arg Arg His  
 185 186 187  
 Lys His Arg Pro Ala Pro Arg Leu Gln Pro Ser Arg Thr Ser Pro Ala  
 188 189 190  
 Ala Pro Arg Ala Arg Ala Trp Ala Pro Ser Gln Ala Ser Gln Ala Ala  
 191 192 193  
 Leu His Val Pro Tyr Ala Thr Ile Asn Thr Ser Cys Arg Pro Ala Thr  
 210 215 220  
 Leu Asp Thr Ala His Pro His Gly Gly Pro Ser Trp Trp Ala Ser Leu  
 225 230 235 240  
 Pro Thr His Ala Ala His Arg Pro Gln Gly Pro Ala Ala Trp Ala Ser  
 245 250 255  
 Thr Pro Ile Pro Ala Arg Gly Ser Phe Val Ser Val Glu Asn Gly Leu  
 260 265 270  
 Tyr Ala Gln Ala Gly Glu Arg Pro Pro His Thr Gly Pro Gly Leu Thr  
 271 280 285  
 Leu Phe Pro Asp Pro Arg Gly Pro Arg Ala Met Glu Gly Pro Leu Gly  
 290 295 300  
 Val Arg  
 305

<110> 117  
 <111> 847  
 <112> EFT  
 <113> Homo sapiens

<114> 117  
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 1 15 20  
 Arg Gly Leu Arg Arg Arg Gly Gln Pro Arg Val Val Val Ile Gly Ala  
 25 30  
 Gly Leu Ala Gly Leu Ala Ala Ala Lys Ala Leu Leu Gln Gln Gly Phe  
 35 40 45  
 Thr Asp Val Thr Val Leu Gln Ala Ser Ser His Ile Gly Gly Arg Val  
 50 55 60  
 Gln Ser Val Lys Leu Gly His Ala Thr Phe Gln Leu Gly Ala Thr Trp  
 65 70  
 Ile His Gly Ser His Gly Asn Pro Ile Tyr His Leu Ala Gln Ala Asn  
 75 80  
 Gly Leu Leu Ala Ala Thr Thr Asp Gly Ala Arg Ser Val Gly Arg Ile  
 85 90  
 Ser Leu Tyr Ser Lys Asn Gly Val Ala Cys Tyr Leu Thr Asn His Gly  
 95 100 105  
 Arg Arg Ile Pro Lys Asp Val Val Gln Gln Phe Ser Asp Leu Tyr Asn  
 110 115 120  
 Gln Val Tyr Asn Leu Thr Gln Gln Phe Phe Arg His Asp Lys Pro Val  
 125 130 135  
 Asn Ala Gln Ser Gln Asn Ser Val Gly Val Phe Thr Arg Gln Gln Val  
 140 145 150  
 Arg Asn Arg Ile Arg Asn Asp Pro Asp Asp Pro Gln Ala Thr Lys Arg  
 155 160 165  
 Leu Lys Leu Ala Met Ile Gln Gln Tyr Leu Lys Val Gln Ser Cys Gln  
 170 175 180  
 Ser Ser Ser His Ser Met Asp Gln Val Ser Leu Ser Ala Phe Gly Gln  
 185 190 195  
 Trp Thr Gln Ile Pro Gly Ala His His Ile Ile Pro Ser Gly Phe Met  
 200 205 210  
 Arg Val Val Gln Leu Leu Ala Gln Gly Ile Pro Ala His Val Ile Gln  
 215 220 225  
 Leu Gly Lys Pro Val Arg Lys Ile His Thr Asp Gln Ala Ser Ala Arg  
 230 235 240

Pro Arg Gly Pro Glu Ile Glu Pro Arg Gly Glu Gly Asp His Asn His  
 275 280 285  
 Asp Thr Gly Glu Gly Gly Glu Gly Gly Glu Glu Pro Arg Gly Gly Arg  
 290 295 300  
 Trp Asp Glu Asp Glu Glu Trp Ser Val Val Val Glu Cys Glu Asp Cys  
 305 310 315 320  
 Glu Leu Ile Pro Ala Asp His Val Ile Val Thr Val Ser Leu Gly Val  
 325 330 335  
 Leu Lys Arg Glu Tyr Thr Ser Phe Phe Arg Pro Gly Leu Pro Thr Glu  
 340 345 350  
 Lys Val Ala Ala Ile His Arg Leu Gly Ile Gly Thr Thr Asp Lys Ile  
 355 360 365  
 Phe Leu Glu Phe Glu Glu Pro Phe Trp Gly Pro Glu Cys Asn Ser Leu  
 370 375 380  
 Glu Phe Val Trp Glu Asp Glu Ala Glu Ser His Thr Leu Thr Tyr Pro  
 385 390 395 400  
 Pro Glu Leu Trp Tyr Arg Lys Ile Cys Gly Phe Asp Val Leu Tyr Trp  
 405 410 415  
 Pro Glu Arg Tyr Gly His Val Leu Ser Gly Trp Ile Cys Gly Glu Glu  
 420 425 430  
 Ala Leu Val Met Glu Lys Cys Asp Asp Glu Ala Val Ala Glu Ile Cys  
 435 440 445  
 Trp Glu Met Leu Arg His Phe Thr Gly Asn Pro Asn Ile Trp Lys Trp  
 450 455 460  
 Arg Arg Ile Leu Arg Ser Ala Trp Gly Ser Asn Pro Tyr Ile Arg Gly  
 465 470 475 480  
 Ser Tyr Ser Tyr Thr Glu Val Gly Ser Ser Gly Ala Asp Val Glu Lys  
 485 490 495  
 Leu Ala Lys Pro Leu Pro Tyr Thr Glu Ser Ser Lys Thr Ala Ser Met  
 500 505 510  
 Glu Val Leu Phe Ser Gly Glu Ala Thr His Arg Lys Tyr Tyr Ser Thr  
 515 520 525  
 Thr His Gly Ala Leu Leu Ser Gly Glu Arg Glu Ala Ala Arg Leu Ile  
 530 535 540  
 Glu Met Tyr Arg Asp Leu Phe Glu Glu Gly Thr  
 545 550 555

118-119

118-119

118-119

118-119-120-121-122

118-119

Met Gly Ser Glu His Ser Ala Ala Ala Arg Pro Ser Ser Tyr Arg Arg  
 1 5 10  
 Lys Glu Glu Arg Asp Arg Asp Gly Leu Leu Ala Glu Arg Glu Glu  
 15 20 25  
 His Ala Ile Ala Glu Phe Pro Tyr Val Glu Ile Thr Gly Arg Arg Ser  
 30 35 40  
 Ile Thr Tyr Leu Thr Cys Glu Gly Thr Gly Tyr Ile Pro Thr Glu Glu  
 45 50 55  
 Val Asn Glu Leu Val Ala Leu Ile Pro His Ser Asp Glu Arg Leu Arg  
 60 65 70 75  
 Pro Glu Arg Thr Lys Glu Tyr Val Leu Leu Ser Ile Leu Leu Cys Leu  
 80 85 90 95  
 Leu Ala Ser Gly Leu Val Val Phe Phe Leu Phe Pro His Ser Val Leu  
 100 105 110 115  
 Val Asp Asp Asp Gly Ile Lys Val Val Lys Val Thr Phe Asn Lys Glu  
 120 125 130 135  
 Asp Ser Leu Val Ile Leu Thr Ile Met Ala Thr Leu Lys Ile Arg Asn  
 140 145 150

Ser Asn Phe Tyr Thr Val Ala Val Thr Ser Leu Ser Ser Ala Ile Ala  
145 150 155 160  
Tyr Met Asn Thr Val Val Ser Thr Tyr Val Thr Thr Asn Val Ser Leu  
165 170 175  
Ile Pro Pro Arg Ser Glu Gln Leu Val Asn Phe Thr Gly Lys Ala Ala  
180 185 190  
Met Gly Gly Pro Phe Ser Tyr Val Tyr Phe Phe Cys Thr Val Pro Glu  
195 200 205  
Ile Leu Val His Asn Ile Val Ile Phe Met Arg Thr Ser Val Lys Ile  
210 215 220  
Ser Tyr Ile Gly Leu Met Thr Gln Ser Ser Leu Glu Thr His His Tyr  
225 230 235 240  
Val Asp Cys Gly Gly Asn Ser Thr Ala Ile  
245 250

0210> 133  
0211> 174  
0212> PRT  
0213> Homo sapiens

0400> 140  
Met Glu Ala Pro Ala Phe Arg Asp Lys Lys Gln Gly Val Ser Ala Lys  
1 5  
Asn Glu Gly Ala His Asp Pro Asp Tyr Glu Asn Ile Thr Leu Ala Phe  
10 15 20  
Lys Asn Glu Asp His Ala Lys Gly Gly His Ser Arg Pro Thr Ser Glu  
25 30 35 40  
Val Pro Ala Gln Lys Arg Pro Pro Ser Asp Ser Thr Gln Val Leu Tyr  
45 50 55  
Trp Leu Tyr Arg Ala Ile Leu Ser Leu Tyr Ile Leu Leu Ala Leu Ala  
60 65 70 75 80  
Phe Val Leu Cys Ile Ile Leu Ser Ala Phe Ile Met Val Lys Asn Ala  
85 90 95  
Glu Met Ser Lys Glu Leu Leu Gly Phe Lys Arg Glu Leu Trp Asn Val  
100 105 110  
Ser Asn Ser Val Glu Ala Cys Glu Glu Arg Gln Lys Arg Gly Trp Asp  
115 120 125  
Ser Val Glu Glu Ser Ile Thr Met Val Arg Ser Lys Ile Asp Arg Leu  
130 135 140  
Glu Thr Thr Leu Ala Gly Ile Lys Asn Ile Asp Thr Lys Val Glu Lys  
145 150 155 160  
Ile Leu Glu Val Leu Gln Lys Met Pro Ala Ser Ser Pro Glu  
165 170

0410> 141  
0411> 141  
0412> DNA  
0413> Homo sapiens

0410> 141  
atgagacat gaggatcag gaggaggag gaggagagc tggactctt gaggagat  
gtatggggt tctgtgtgt tgcagggtg gactggagca cctgtatcc tggaggtc  
cgcacatgac agctggggt gaggccag gctggaaat tcatgttga ggtatccac  
tctggatc tgggggtc caccactat tctgtgtg caggggatg ctggaggac  
ctgtgttga agatgaagt ctgtgtttt aaacacctc cactatgt tgggtgac  
cgtatgagc cagagagag ccaatttac ttctcggga acctggact gaggcttc  
gtatgttg cagacat aggttggg gattatgc gctatgac ctatcttc  
atggagag atcttggg ctggacac tggactac agagctga cagaggtg  
atgaactt atgaattt cagagatg gttatgtt atttatca ctatcttc  
atggttg cactatga caggttgg ggtatgca tttatca atgtttt  
tctatgtt ctatatac atctatca tcatatct atttatg gttatgtt





aaagctgttgc atgttgagtc tccctgttcag aa jgtt

1246

<210> 137  
<211> 918  
<212> DNA  
<213> Homo sapiens

<400> 137  
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accccgaggg tctgggttca agttcggatg gagggcaacg agctctgtt attcaacatc 120  
cggtgtgggt tccctgggtc tggctccatc tccctgggtga ctgttgatg ggggtgtc 180  
gacgggtgtg gggggacac gctgggtgtg ttgacccag aacgtgtcat ccggcaatgg 240  
gcccctgttc gccaggcccg ctgggaaacc caagacagca tctctctcat cctgggaggt 300  
tcgggggaca ggaacccctg cgcacacac cctctctgtt gaaattttt gtctttttt 360  
gaggggtcct gggaggtctg tgggagcttc ccggccagct cagacccagg gctcttttt 420  
cccttgatgc cggacccat tctgggaca taccctggct ggtcttggg ggtcttttt 480  
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gctctttttt tctctgttgc cgcacacac cccgggcat cagaggtat ggtcttttt 600  
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cgaacccatg ctgggacac agctcaccac cctggggggg cgtctctgtt ggtctcttc 780  
gaggggtcct ggtctctgtt ggtctctgtt ggtctctgtt ggtctctgtt ggtctctgtt 840  
cgaacccatg cgtctctgtt cgtctctgtt cgtctctgtt cgtctctgtt cgtctctgtt 900  
gaggggtcct ggtctctgtt cgtctctgtt cgtctctgtt cgtctctgtt cgtctctgtt 960

<210> 138  
<211> 1008  
<212> DNA  
<213> Homo sapiens

<400> 138  
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aaagcaacat ttgagcaggg ttccacgggt gtcactgttg ttgaggtttt ggtctgtgtt 180  
ggagggtgtt tctcaggtgt gaaacttggg cagggcagct ttgaggtgtt ggtctgtgtt 240  
atcctgtgtt cctctgggga cctcctctat cctcaggttg aagcaacat ggtctgtgtt 300  
gagcaacat atgttggaat gagggttggt ggtctgtgtt ggtctgtgtt ggtctgtgtt 360  
ggtctgtgtt ggtctgtgtt ggtctgtgtt ggtctgtgtt ggtctgtgtt ggtctgtgtt 420  
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ggtctgtgtt ggtctgtgtt ggtctgtgtt ggtctgtgtt ggtctgtgtt ggtctgtgtt 900  
ggtctgtgtt ggtctgtgtt ggtctgtgtt ggtctgtgtt ggtctgtgtt ggtctgtgtt 960

<210> 139

<211> T50  
 <211> TNA  
 <213> Homo sapiens

<478> 139  
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 aaagggaacg gcttctgtggc tgaacgagag cagggaagag ccattgtctc gctccatct 120  
 gtcgaattcc cttggadaga tagcatcacc tctctcactt gccaggggag aggtctactt 180  
 caacacagag agttaaattg gttaggtgggt ttgatccac accgtgat c aggtctctt 240  
 ccttagagaa cttaagcaata tctctctctg tccatctctc ttctgtctct ggcattctct 300  
 ttgggtgggtt tcttctctgt tccgcattcc gtctctgttg atgatgacgg atcaaaagtg 360  
 gtaaaagtc catttaattg gcaagactcc ctgtgaattc tccaccatct ggcctctct 420  
 aaaatcagga actccaactt ctacacgggtg gtagtgacca gctctgtccag ccagattctg 480  
 taatgtgaaa cagtgttcag tacatatgtg actactaacg tctccctctt tctactctct 540  
 agttaggaat cgttgaattt taacgggaag gcagagatgg gaggacggtt tctctctct 600  
 taattctctt gaaaggtacc tgagatctct ggcacacaa tagtgatctt ccttggatct 660  
 tctgtgaga tctctactt tggctctatg acccagagct ccttggagat aattctctt 720  
 gtcattctct tgggaattc cccagctatt 780

<212> 141  
 <212> T50  
 <212> TNA  
 <213> Homo sapiens

<479> 141  
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 aaagggaacg gcttctgtggc tgaacgagag cagggaagag ccattgtctc gctccatct 120  
 gtcgaattcc cttggadaga tagcatcacc tctctcactt gccaggggag aggtctactt 180  
 caacacagag agttaaattg gttaggtgggt ttgatccac accgtgat c aggtctctt 240  
 ccttagagaa cttaagcaata tctctctctg tccatctctc ttctgtctct ggcattctct 300  
 ttgggtgggtt tcttctctgt tccgcattcc gtctctgttg atgatgacgg atcaaaagtg 360  
 gtaaaagtc catttaattg gcaagactcc ctgtgaattc tccaccatct ggcctctct 420  
 aaaatcagga actccaactt ctacacgggtg gtagtgacca gctctgtccag ccagattctg 480  
 taatgtgaaa cagtgttcag tacatatgtg actactaacg tctccctctt tctactctct 540  
 agttaggaat cgttgaattt taacgggaag gcagagatgg gaggacggtt tctctctct 600  
 taattctctt gaaaggtacc tgagatctct ggcacacaa tagtgatctt ccttggatct 660  
 tctgtgaga tctctactt tggctctatg acccagagct ccttggagat aattctctt 720  
 gtcattctct tgggaattc cccagctatt 780

<213> 141  
 <213> T50  
 <213> TNA  
 <213> Homo sapiens

<214>  
 <214> T50  
 <214> TNA ... (1934)

<480> 141  
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 aaagggaacg gcttctgtggc tgaacgagag cagggaagag ccattgtctc gctccatct 120  
 gtcgaattcc cttggadaga tagcatcacc tctctcactt gccaggggag aggtctactt 180  
 caacacagag agttaaattg gttaggtgggt ttgatccac accgtgat c aggtctctt 240  
 ccttagagaa cttaagcaata tctctctctg tccatctctc ttctgtctct ggcattctct 300  
 ttgggtgggtt tcttctctgt tccgcattcc gtctctgttg atgatgacgg atcaaaagtg 360  
 gtaaaagtc catttaattg gcaagactcc ctgtgaattc tccaccatct ggcctctct 420  
 aaaatcagga actccaactt ctacacgggtg gtagtgacca gctctgtccag ccagattctg 480  
 taatgtgaaa cagtgttcag tacatatgtg actactaacg tctccctctt tctactctct 540  
 agttaggaat cgttgaattt taacgggaag gcagagatgg gaggacggtt tctctctct 600  
 taattctctt gaaaggtacc tgagatctct ggcacacaa tagtgatctt ccttggatct 660  
 tctgtgaga tctctactt tggctctatg acccagagct ccttggagat aattctctt 720  
 gtcattctct tgggaattc cccagctatt 780







caaatgtgag taatgggaga agaatatggc caatgtctgca catcagaggga gtagggaagga 3067  
 agacccagat caatgggccc agcccccac acacacagcc cgaacagrag gggcagagca 3129  
 gacatcttc gaagtgtgc caagtccgca tttagacctt gttctggggc acagtcac 3180  
 aactggctta ggtcactgt cctgagtgc agtaaaageta taactttga tcaac 3234

<210> 142  
 <211> 2490  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> CDS  
 <222> (70)...(1026)

<400> 142  
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 cccgcacag atg gtt gag ctg atg ttc cag ctg ttg ctg ctg ctg ctg ctg 111  
 Met Val Glu Leu Met Phe Pro Leu Leu Leu Leu Leu Leu Pro  
 1 5 10  
 ttc ctg ctg tat atg gct ggt ctc caa atc agg aua atg ttc ttc atc 161  
 Phe Leu Leu Tyr Met Ala Ala Pro Gln Ile Arg Lys Met Leu Ser Ser  
 15 20 25 31  
 gaa gta ttc aac tca acg gtt gag ttc ccc gga aaa ata ttc gtt ttc 211  
 Gly Val Cys Thr Ser Thr Val Gln Leu Pro Gly Lys Val Val Val Val  
 35 40 45  
 aca cca ttc atc aca gct atc ggg aag gag aca gcc aaa taa ttc gtt 261  
 Thr Gly Ala Asn Thr Gly Ile Gly Lys Glu Thr Ala Lys Val Leu Ala  
 50 55 60  
 cag aaa gta ttc aga ata ttc tta gct tgc cgg gtt gtt taa aac gga 311  
 Gln Arg Gly Ala Arg Val Tyr Leu Ala Cys Arg Asp Val His Lys Gly  
 65 70 75  
 gaa ttc gtt gct aaa gag atc gag acc acc aca ggg aac gag gag gtt 361  
 Glu Leu Val Ala Lys Glu Ile Gln Thr Thr Thr Gly Asn Gln Gln Val  
 80 85 90  
 ttg gtt cgg aaa ctg gag ctg ttc cat act aac ttc att tga gct ttc 411  
 Leu Val Arg Lys Leu Asp Leu Ser Asp Thr Lys Ser Ile Arg Ala Phe  
 95 100 105 111  
 gct aac gga ttc tta gct gag gaa aag aac ctg aac gtt ttc atc aac 461  
 Ala Lys Gly Phe Leu Ala Glu Glu Lys His Leu His Val Leu Ile Asn  
 115 120 125  
 aat gta gta gtt atg atg tgt cgt taa ttc aac aca taa gat gtt ttc 511  
 Asn Ala Gly Val Met Met Cys Pro Tyr Ser Lys Thr Ala Asp Gly Phe  
 130 135 140  
 gag atg ttc ata gga gtt aac aac ttg ggt ctc ttc ttc tta aac aac 561  
 Gln Met His Ile Gly Val Asn His Leu Gly His Phe Leu Leu Thr His  
 145 150 155  
 ctg ctg tta taa aac ata aag aac tca ggt cta tca aga ata ata aac 611  
 Leu Leu Leu His Lys Leu Lys Glu Ser Ala Pro Ser Arg Ile Val Asn  
 160 165 170  
 gtt ttc ttc ttc gaa cat ctc ctg gga agt aac aac ttc ttc atc atc atg 661  
 Val Ser Ser Leu Ala His His Leu Gly Arg Ile His Phe His Asn Leu  
 175 180 185 190  
 gag ggt gag aaa ttc taa aat gaa ggt ctg ggc taa tgt aac agt aag 711  
 Gln Gly Glu Lys Phe Tyr Asn Ala Gly Leu Ala Tyr Cys His Ser Lys  
 195 200 205  
 ata gcc aac atc ctg ttc aac gag gaa cta ggc ggt aga ctg aac atc 761  
 Leu Ala Asn Ile Leu Phe Thr Gln Glu Leu Ala Arg Arg Leu Lys Gly  
 210 215 220  
 act gtt ttc aac aac ttc ttc gaa cat cat ggt aca ttc cat ttc tta 811  
 Ser Gly Val Thr Thr Tyr Ser Val His Pro Gly Thr Val Gln Ser His  
 225 230 235



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tct gga aaa ttc cag gga att aaa tta cag tta atg aac att att tta 354
Phe Gly Glu Glu Pro Gly Ile Lys Ser Glu Leu Met Asn Leu Ile Arg
      45      50      55
tct gta aga aac gta atg aga gta tta ata ata gta aac tta att 355
Ser Val Arg Thr Val Met Arg Val Pro Leu Ile Ile Val Asn Ser Ile
      60      65      70
gca att cag tta ctt tta tta ttt gga tgaatatcag tggagaaat g 356
Ala Ile Val Leu Leu Leu Leu Phe Gly
      75      80
gagactcaga aagagactg ccagtagaag ctattacttt ggtcattatt ggaatatata 410
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gaa	aat	atc	acc	ttg	gcc	ttc	aaa	aat	cag	gac	cat	gca	aag	agt	ttt				114
Glu	Asn	Ile	Thr	Leu	Ala	Phe	Lys	Asn	Gln	Asp	His	Ala	Lys	Gly	Ile				
				30					35					40					
cat	cca	cga	ccc	acg	agc	caa	gtc	cca	gcc	cag	tgc	agg	ccg	ccc	taa				196
His	Ser	Arg	Pro	Thr	Ser	Gln	Val	Pro	Ala	Gln	Cys	Arg	Pro	Pro	Ser				
			45					50					55						
gac	ccc	acc	cag	gtc	ccc	tgc	tgg	ttg	tac	aga	gcc	atc	ctg	agc	ctg				244
Asp	Ser	Thr	Gln	Val	Pro	Cys	Trp	Leu	Tyr	Arg	Ala	Ile	Leu	Ser	Leu				
			60				65					70							
tac	atc	ctc	ctg	gcc	ctg	gcc	ttt	gtc	ctc	tgc	atc	atc	ctc	cca	gac				292
Tyr	Ile	Leu	Leu	Ala	Leu	Ala	Phe	Val	Leu	Cys	Ile	Ile	Leu	Ser	Ala				
			75			80					85								
ttc	atc	atg	gtg	aag	aat	gct	gag	atg	ccc	aag	gag	ctg	ctg	ggc	att				340
Phe	Ile	Met	Val	Lys	Asn	Ala	Glu	Met	Ser	Lys	Glu	Leu	Leu	Gly	Phe				
			90		95				100					105					
aaa	agg	gag	att	tgg	aat	gtc	cca	aac	ccc	gta	caa	gca	tgc	gaa	gac				388
Lys	Arg	Glu	Leu	Trp	Asn	Val	Ser	Asn	Ser	Val	Gln	Ala	Cys	Glu	Gln				
			110					115					120						
aga	cag	aaa	aga	ggc	tgg	gat	ccc	gtt	cag	cag	agg	atc	acc	atg	ggt				436
Arg	Gln	Lys	Arg	Gly	Trp	Asp	Ser	Val	Gln	Gln	Ser	Ile	Thr	Met	Val				
			125				130					135							
agg	agc	aag	att	gat	aga	tta	gag	acg	aca	tta	gca	ggc	ata	aaa	aac				464
Arg	Ser	Lys	Ile	Asp	Arg	Leu	Glu	Thr	Thr	Leu	Ala	Gly	Ile	Lys	Asn				
			140				145					150							
att	gac	aca	aag	gta	cag	aaa	atc	tta	gag	gtg	ctg	cag	aaa	atg	cca				532
Ile	Asp	Thr	Lys	Val	Gln	Lys	Ile	Leu	Glu	Val	Leu	Gln	Lys	Met	Pro				
			155			160						165							
cag	ccc	cca	ccc	caa	taa	atg	agag	gac	att	gtg	gag	ccaaa	agc	ccc					580
Gln	Ser	Ser	Pro	Gln															
170																			
aaattggaag	atgggggtgc	acctggccaac	gaagacggga	aatgaccccc	ccccccagcc														640
tagtggaac	ctgccccctg	tcccangtat	agaaaaaccc	cgagtcattc	tgantgagtg														720
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cagtgtatct	cccgagaaag	tgatgaatga	ataggactga	gagtcacact	taattgtgga														840
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ataaataaag	tcaggggaag	acag																	1120